Harmonising the Spheres

A Proposed Platonic Paradigm

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Abstract

The phrase "the harmony of the spheres" is a familiar one to many musicians. It has inspired works such as Hindemith's *Harmonie Der Welt* and the *Planets* suite by Holst. Historically it has been considered a function of a model of a physical universe. Plato, who is the originator of the phrase, introduces it for the first time in the Republic. In recent years, Plato's account in the Republic has been recognised as a "Near Death Experience". This paper explores the possibility that Plato did not intend a description of a *physical* universe, but instead was depicting the structure of a *spiritual* universe. Plato's narrative in the Republic is compared to other classical post-death accounts and to modern Near Death Experience literature. In this context, a spiritual definition of the "spheres" will be given. The benefits of this interpretation are two-fold. In the first place certain "problems" of the assumed Platonic universe no longer exist; in the second instance, Plato's description itself throws new light on certain phenomena of the Near Death Experience. In the finality, an understanding of Plato's myth as a numinous experience as opposed to a quasi-scientific model of ancient astronomy can suggest a synthesis between Eastern and Western perspectives of the near death and post-death experiences.

Introduction

The phrases "The Harmony of the Spheres" or "The Music of the Spheres" have become part of musical folklore. Composers and musicians have absorbed the idea that the planets, as they orbit the sun, somehow emit tones that combine to produce a "cosmic music". Such music, since it is the product of the universe itself, would be in the base sense, a "universal harmony".

The concept is sourced in a passage at the end of "The Republic" by Plato. The paper will examine the development of Plato's description in terms of a physical cosmos. It will explore inconsistencies in this description.

As a result of demonstrated inconsistencies, the paper will propose an alternative paradigm. The proposed paradigm will treat the initial description given in "The Republic" as an instance of the "rebirth" archetype. Descriptions of this instance of the archetype will be given from Western and Eastern sources. The archetypal model will be applied to the original description of Plato and demonstrated to be a model of best fit. Implications of the archetypal model for other instances of the platonic description such as the "Near Death Experience" will be briefly investigated.

A brief survey of the influence of the phrase

In the last one hundred years several composers have produced music based on this concept. The two most famous examples are probably Gustav Holst, who wrote the orchestral suite, "The Planets", and Paul Hindemith who wrote both an opera and a symphony entitled, "Harmonie der Welt". More recently, productions of the following works (all entitled "Harmony of the Spheres"), have appeared:

- a vocal work by the Dutch composer Joep Franssens 2003
- An album by the folk-rock group, Finisterre (2002)
- A three-LP release in 1997 which incorporated music by such bands as Bardo Pond, Charalambides and Drunken Fish.
- A funk-reggae mix by the band Lovangro
- A jazz album by Neil Ardley
- A ballet choreographed by Mark Franco which used music by Varese and Vivaldi

Musicians are not alone in their fascination with the phrase. The musicologist Joscelyn Godwin has extracted the thoughts of over one hundred writers in two sourcebooks ("Harmony of the Spheres" and "Music, Mysticism and Magic"). In a third book ("Harmonies of Heaven and Earth") he has documented the efforts of astronomers, musical theorists and esotericists to arrive at planetary tone scales and tone zodiacs, which would reflect the reality of the concept of "Music of the Spheres".

The persistence of this concept amply fulfils the definition of an archetype given by Jenny Yates¹:

"When images repeat across time and cultures, they are archetypal."

This definition is the basis of the archetypal model proposed in the paper.

Sourcing the Concept

Early Greek writers confidently attribute the concept of the planets producing sound to Pythagoras. Thus the course in astronomical history at Ohio State University has the following to say about the contribution of Pythagoras to astronomy²:

Pythagoras of Samos (d. 497 BC)

Philosopher & Mathematician, founded the Pythagorean school.

Taught that spheres are the perfect geometric shapes.

Pythagorean Model:

Spherical Earth fixed at the center

Planets & Stars on concentric crystalline spheres

Sizes were ratios of small numbers (e.g., 2:1, 3:2)

Vibrations from their rubbing together created a harmonious "Music of the Spheres".

A whole range of classical writers bears witness to the Pythagorean origin of the concept (see, for example *The Harmony of the Spheres*³, chapters 2, 3, 4, 5, and 6). It is perhaps a paradox that the first person whose writing has been preserved was not a member of the Pythagorean school, but an independent philosopher, for the original writer who coined the phrase "harmony of the spheres" was Plato.

The Platonic description

The term is first encountered in literature, in a passage which occurs at the end of the *Republic*. This is not to say that Plato did not derive the concept from Pythagoras. Professor Earnest McClain⁴ has documented an approach to Plato that suggests that Plato borrowed heavily from concepts deriving from the Pythagorean school.

Plato introduces the term in a section of the *Republic*, sometimes called "The Myth of Er". This story describes the experience of "...a brave man, Er, the son of Armenius... who happening on a time to die in battle... as he was about to be buried on the twelfth day, when laid on the funeral pile, he revived, and being revived, he told what he saw in the other state..."

In today's terms, Plato is retelling a 'near-death experience'. Er's near-death experience is significantly different from those recounted in the twentieth century, but it has been observed that accounts of a near-death experience tend to be significantly coloured by the culture of the individual. Thus a twentieth century Westerner may have an experience with Christian overtones, while a Tibetan Buddhist may experience details of the classic *Book of the Dead*.⁶

Er tells us that his soul made a journey through another state. He encounters various after life experiences, finally being joined by many other souls on an enormous meadow. The relevant section of the story begins at this point:

The Myth of Er⁷

"After this, those who had been on the meadow, each for seven days, when they arose found they had to continue traveling on the eighth day. Four days later they came to a place from where they saw something like a pillar extending from the earth to the sky, very like a rainbow, but brighter and purer. After another day's journey they arrived to see at this spot, at the middle of the light, the ends of its attachments stretching from the sky – for this light was the bonds of the sky, like the bracing ropes passed under a trireme, thus holding together the entire circuit. From the extremities stretched the spindle of Necessity by means of which all the revolutions rotated. The staff of the spindle and its hook were made of steel, while the whorl was blended of this and of other kinds.

Now the nature of the whorl was thus: its outward appearance was like that of a whorl here, but from what he said, we must understand it as though there is in one great whorl hollowed and scooped out, another just like it but smaller, piercing it right through, lying inside and fitting together like one container inside another. Similarly a third, and a fourth and then four others. For there were eight whorls altogether lying within one another; their rims appearing like circles from above, constructing the back of a single whorl around the spindle (shaft) which pierced through the middle of the eighth.

Now the first and the outermost whorl was widest at its circular rim, while that of the sixth was the second widest; third was the rim of the fourth, fourth that of the eighth, fifth that of the seventh, sixth that of the fifth, seventh that of the third, eighth that of the second.

The largest whorl was multi-coloured, while the seventh was brightest. The eighth took its colour from the seventh, which illuminated it while the second, and the fifth were similar to

each other and more yellow than the first two. The third was the whitest while the fourth was reddish. The sixth was the second whitest.

But within the whole – as it was carrying them around – the seven inner circles revolved gently in the opposite direction to the whole. The fastest of them was the eighth, second were the seventh, sixth and fifth at the same speed. The third in speed, as it seemed to them as it circled around, was the fourth. Fourth was the third, and fifth the second.

And on each of its circles, seated above them, was a Siren, being carried around as the circle turned uttering one tone each; and from all the eight there was a single harmony sounding together."

It is the "single harmony sounding together" which has become immortalised in the phrase "The harmony of the spheres".

The physical model

The next writer we have who quotes a tradition of the planetary harmony is Plato's pupil, Aristotle. In his work on astronomy, "De Coelo", Aristotle remarks:

"...it is clear that the theory that the movement of the stars produces a harmony, i.e. that the sounds they make are concordant, in spite of the grace and originality with which it has been stated, is nevertheless untrue."

Aristotle attributes the theory specifically to the Pythagoreans. He is quite clear that the "music of the spheres" is a physical phenomenon. In fact, he objects to the theory on the grounds that the noise of the spheres rubbing together would be continually heard, and hence produce an enormous volume of sound. Since this is not so, Aristotle concludes that, "melodious and poetical as the theory is, it cannot be a true account of the facts."

Other early writers to attribute the theory of the planets creating music to 'the Pythagoreans' are: Pliny the Elder (~ 50 CE); Nichomachus of Gerasa (~100CE) and Theon of Smyrna (~140 CE)¹⁰. These are all documented in Godwin (1990).

One very interesting writer is Marcus Tullius Cicero, the famous Roman orator. He documented the concept not in a philosophical or physical discussion, but in a vision of his own – the "Dream of Scipio". This forms part of a longer work, *De Republica* where Cicero writes on the laws and polity of the Roman state. In it Cicero describes a universe comprised of "nine circles, or rather spheres." The outermost being the "celestial sphere" which embraced all the rest and containing firstly seven spheres containing the seven traditional planets and finally "in the center, the ninth of the spheres, is the earth, never moving and at the bottom...." Cicero describes a "great and pleasing sound" that fills his ears. His guide informs him that this is no less than

"...a concord of tones separated by unequal but nevertheless carefully proportioned intervals caused by the rapid motion of the spheres themselves. The high and low tones blended together produce different harmonies...

"..the ...eight spheres... produce seven different tones, this number being, one might almost say, the key to the universe. Gifted men, imitating this harmony on stringed instruments and in singing, have gained for themselves a return to this region, as have those of exceptional abilities who have studied divine matters even in earthly life."

"The ears of mortals are filled with this sound, but they are unable to hear it ... the sound coming from the heavenly spheres revolving at very swift speed is of course so great that human ears cannot catch it; you might as well try to stare directly at the sun, whose rays are much too strong for your eyes" 11

Godwin's two source books trace the enduring popularity of the "Harmony of the Spheres" through the last two thousand years. Some famous philosophical names who wrote on the subject include Boethius, Eriugena, and Ficino. Later writers include Robert Fludd, Athanasius Kircher and, in the late nineteenth century and early twentieth centuries Madam Blavatsky and Rudolf Steiner¹². In the sixteenth century the great astronomer Johannes Kepler was so inspired by the concept that he dedicated his life to discovering the laws which bound music and astronomy together:

"By the end of his career he had solved both the problem of our type A scales (what law governs the planetary distances?) and that of Type B (what governs their velocities?) His solution of the first was geometrical, that of the second musical, and his Third Law of Planetary Motion (that the squares of the periodic times are to each other as the cubes of the mean distances from the Sun) provided the link between them."

Many of these writers dedicated themselves to discovering scales and tones which represented the "harmonia" first recorded by Plato. Over more than two thousand years of unrelenting human inquiry, there seems to have been a general consensus that the "Harmony of the Spheres" is an artefact of a physical universe.

Questioning the Paradigm

Considering the passage from the Republic is the earliest known written example of the "harmony of the spheres", it is remarkable that none of Plato's contemporaries nor near contemporaries mention his contribution. Aristotle who was certainly not wary of quoting Platonic doctrines (often with the aim of discrediting them, eg the *Metaphysics*¹⁴) prefers to attribute the theory to the 'Pythagoreans'. Cicero – whose *De Republica* is blatantly modelled on Plato's original – has taken the dictum "Imitation is the sincerest form of flattery" to the extreme by inserting his own version of the Myth of Er. In his version, Cicero has 'corrected' Plato's account according to the accepted cosmology of his era. Later writers of the late classical period simply never mention Plato's version of planetary harmony.

There are a number of problems with the "Myth of Er" if it is taken simply as a description of an ancient cosmological world view. Some of these problems are simple; others more subtle.

In the first place, Plato's narrative specifically includes a number of anomalous elements:

- 1. The "pillar" which extends "from the earth to the sky, very like a rainbow, but brighter and purer".
- 2. The "attachments" stretch "from the sky".
- 3. From the extremities stretched the "spindle of Necessity" by means of which all the revolutions rotated.
- 4. Instead of spheres, Plato has "whorls". The "whorl" (σφονδυλος) was a circular counterbalance mounted on a spindle for weaving. The whorls themselves are fitted one inside the other, pierced by the shaft of the "spindle of Necessity".

In a physical sense, Plato gives four 'dimensions' to his whorls:

- 1. Their position (relative to the central spindle).
- 2. The colours attributed to the "planets".
- 3. The speeds of rotation.
- 4, The widths of the whorls.

The Dimensions of the Whorls

The following discussion postulates that Plato's description was meant to apply to a physical model of the cosmos.

Cicero (in the "Dream of Scipio") gives the conventional order of planets (as given, for example in Ptolemy's *Tetrabiblos* of the first century, CE¹⁵):

Sphere	Planet
8 th	Fixed stars
7 th	Saturn
6 th	Jupiter
5 th	Mars
4 th	Sun
3 rd	Venus
2 nd	Mercury
1 st	Moon

Table 1: The Order of Planetary Spheres C1 CE

A tabulation of Plato's four dimensions of description with the Ptolemaic order in terms of speed of rotation added, gives Table 2:

Whorl	Position	Relative width of circle	Relative speed of rotation	Colour	Planet (Ptolemy)
1	Outermost	Broadest	orrotation	Multicoloured	Fixed stars
2	0 00000000	8 th	5	Yellower than 7, 8	Saturn
3		7^{th}	4	Whitest	Jupiter
4		6 th	3	Reddish	Mars
5		6 th	2	Like 2	Sun
6		2 nd	2	2 nd whitest	Venus
7		5 th	2	Brightest	Mercury
8	Innermost	4 th	Fastest	Receives colour by	Moon
				the seventh shining	
				on it	

Table 2: Plato's Descriptions of the Whorls with Conventional Planetary Order

The first discrepancy is that the Sun is in the wrong position. Although Cicero has specifically stated that it is "...occupying almost the middle position..."; this cannot be in Plato's scheme of things, because Plato states that the innermost whorl receives colour by the seventh shining on it. Since Anaxagoras had already discovered that the Moon received its light from the Sun, Plato would have had to place the Sun at position seven, rather than at position four. In Table 3, the position of the Sun is repositioned according to this, and the other planets are placed according to the observed movements of the planets through the sky:

Whorl	Position	Relative width of circle	Relative speed of rotation	Colour	Planet
1	Outermost	Broadest		Multicoloured	Fixed stars
2		8 th	5	Yellower than 7, 8	Saturn
3		7^{th}	4	Whitest	Jupiter
4		6 th	3	Reddish	Mars
5		6 th	2	Like 2	Mercury
6		2 nd	2	2 nd whitest	Venus
7		5 th	2	Brightest	Sun
8	Innermost	4 th	Fastest	Receives colour by the	Moon
				seventh shining on it	

Table 3: Planetary Spheres Repositioned According to Plato's Description

The motions of the planets in this table still correspond to the observed motions of the planets through the sky. (Although Venus and Mercury move noticeably quicker than the Sun, their average motion over a year is about the same.) The colours in the table appear to correlate with the traditional colours of the planets. Mars is red; the Sun is the brightest, the Moon receives light by the Sun shining on it. There might be some disagreement with the assertion that Mercury and Saturn are yellow – but the table largely works, if it is hypothesised that this is what Plato wanted in the first place.

Unfortunately, there is one column in the table that doesn't seem to match up. The *Width* of the whorls doesn't relate to the planets at all. If Plato was talking about concentric "spheres" then the width column would have to relate to the diameter of the sphere, and correspond exactly with the position of the whorl – the broadest on the outside, (which it is) and the narrowest on the inside (which it is not!) Plato goes to considerable trouble to tell us that his whorls are nested like bowls, one inside the other:

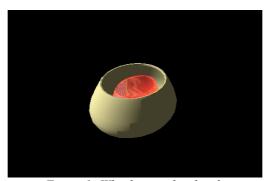


Figure 1: Whorls nested as bowls

If these bowls were transparent, then it could be visualised that the lips of different bowls could curl over in different amounts:

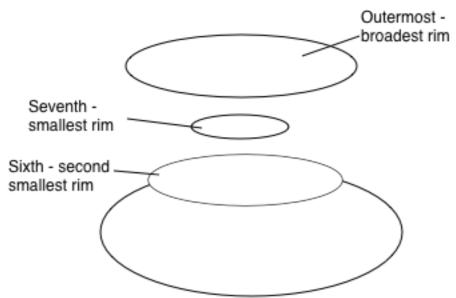


Figure 2: The Circular Openings of Nested Whorls

It is difficult to imagine just what planetary qualities this picture corresponds to. On the one hand, Plato seems to have left enough clues in this passage for later readers to identify his 'whorls' with the planetary spheres. He omitted (unlike Cicero) the final verification of this scheme of things – he did not *name* the planets.

In conclusion, the postulate that Plato is proposing a physical description, does not provide a match with the current Greek cosmological models. This is true in broad outline (for example the pillar and the spindle) and also in fine grain (the lack of correlation with the width dimension of the whorls).

The platonic dialogues are filled with word play, with puns and with subtle allegories. (The American Philological Association is hosting a conference on "Humour in Plato" in 2007. ¹⁶) Earnest McClain has demonstrated that many of Plato's descriptions can be interpreted in musical terms. ¹⁷ His musical models often provide fine detail analysis of Plato's concepts which are not only self-consistent within a particular dialogue, but also cross-link themes over several different dialogues. Bearing in mind these significant difficulties which arise if Plato's "Myth of Er" is taken as a statement about an accepted cosmology of the physical cosmos, a second model – an alternative paradigm – will be presented which attempts to account for the discrepancies in Plato's story.

A simple map and metric for the human psyche

Postulate: The human psyche is a whole unit. This totality is represented by a circle:

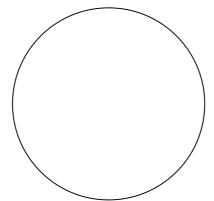


Figure 3: The Totality of the Human Psyche

The circle is divided vertically by a line through the centre. This creates two halves, "Realm 1" and "Realm 2" respectively.



Figure 4: The Two Realms

Realm 1 is defined as that aspect of the psyche which operates according to the laws of logic, as (for example) expressed by Aristotle in the "Organon". To this aspect of the psyche will belong such expression as mathematics, science and any other form of thinking based on linear processes of logical deduction and induction. Realm 1 has a correspondence with what psychology has named the human "Conscious". Normal waking consciousness, by and large, will be Realm 1.

Realm 2 is defined as that aspect of the psyche which operates through non-linear processes. Such processes may include dreams, intuition, myths. Whereas Realm 1 is a verbal, linear-process oriented consciousness; Realm 2 is imagic, intuitive and non-linear. Art, music, spirituality, and mythology are typical of Realm 2 consciousness. Realm 2 has a correspondence with what psychologists have labelled the "unconscious" and the "Collective Unconscious".(For example Freud, *Interpretation of Dreams*¹⁸ and Jung *Archetypes and the Collective Unconscious*.¹⁹)

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By definition, Realm 2 is not perceivable by Realm 1 consciousness. If a researcher desires to examine the contents of Realm 2, they are in the position of a scientist constructing a classical "black box" experiment.²⁰ That is, although the researcher is unable to open the black box, or look directly into it – they can infer its contents from observing its inputs and outputs. In the case of the Realm 2 "Black Box", it is even more difficult, for researchers are rarely in the position of providing inputs, they can only observe outputs.

The work of Carl Jung and many others, have indicated that the contents of Realm 2 are structured. Jung termed these structures the "archetypes".

Jung facilitated the archetypal discussion in order to provide an explanation of recurring 'motifs' which he found in the dreams of his patients. Such motifs might have close analogies in such diverse fields as mythology, eastern philosophy and alchemy. Jung remarked:

"The heterogeneous material adduced for comparison may seem in the highest degree baffling to the academically educated reader who has met these items only in an impersonal context - historical, ethnic, or geographical - but who does not know their psychological affinities with analogous formations, themselves derived from the most varied sources. He will naturally be taken aback, at first, if certain symbols in ancient Egyptian texts are brought into intimate relationship with modern findings concerning the popular religion of India and at the same time with the dreams of an unsuspecting European. But what is difficult for the historian and philologist to swallow is no obstacle for the physician. His biological training has left him with far too strong an impression of the comparability of all human activities for him to make any particular to-do about the similarity, indeed the fundamental sameness, of human beings and their psychic manifestations." ²¹

Archetypes are persistent (over time and space)²² they are multiple²³; they are biologically grounded²⁴; they have no form, but act as "organising principles for the things we do;"²⁵ and they are frequently numinous.²⁶

It is because the contents of Realm 2 are structured through the archetypes, that it is possible to perceive connections through many disparate cultural expressions. For example, a discussion of the forms of the "rebirth" archetype by Carl Jung included Buddhism; the Greek Mysteries; mystical vision; the New Testament; Alchemy; fairy stories; myths and the Koran ²⁷

The archetypal model proposed to fit Plato's description of the origin of the "Harmony of the Spheres is based on the rebirth archetype.

The Myth of Er as Rebirth Archetype

It is, of course, impossible to know what Plato himself was intending to describe. Those who followed Plato, tended to take up "Realm 1" positions in trying to create an artefact of a physical cosmology out of the Myth of Er.

Frederick Copleston provides a contrasting view when he suggests²⁸:

"Plato in no way fell a victim to the crude psychology of the former Cosmological Schools, in which the soul was reduced to air or fire or atoms; he was neither materialist nor epiphenomenalist, but an uncompromising spiritualist."

One might restate Copleston's dictum as:

"[Plato] was not Realm 1 ["materialist"] but Realm 2 [uncompromising spiritualist]."

According to Copleston, the soul for Plato is "clearly distinct from the body" and "the true tendance of the soul must be its chief concern." The *Myth of Er*, in fact contains no statement about the soul that is not supported elsewhere in Plato. To define Er's journey as a Near Death Experience would be to ignore half the account. In the *Myth of Er*, the soul leaves the body; it journeys to another realm, and then it returns to the body. In other words, the Myth is an account of a death and rebirth process. Plato recounts the journey of the soul from life to explicitly in the *Meno*:

"SOCRATES: They say that the soul of man is immortal, and at one time comes to an end, which is called dying, and at another is born again, but never perishes." ³⁰

Again, in the *Phaedrus*, Plato describes how the winged soul mounts up to the heavens, experiences the divine and then returns to earth. It is also in the *Phaedrus* (246a) that Plato describes the soul making use of a 'vehicle' (a chariot) in which to traverse the heavens.

The model which will be proposed and applied to the "Myth of Er" is as follows:

"The description given in the last part of the 'Myth of Er' is an archetypal description of the 'vehicle' assumed by the soul on its return to the body. This description agrees in detail with other descriptions from a range of times and cultures. In particular, the description of the seven whorls distributed along a spindle equates to the distribution of seven 'energy centres' distributed along the spine."

The subtle body – the vehicle of the soul

The basic archetype within which the Myth of Er and the 'Harmony of the Spheres' is set is that of rebirth. It has already been established that Plato saw the soul as an immortal identity which passed through death, ascended to the heavens and then descended again into another (mortal) body. In the Phaedrus (246a), Plato suggests that the soul is contained within another form:

"To tell what it really is would be a matter for utterly superhuman and long discourse..."³¹

Plato's successors tended to amplify this concept. The Neoplatonist Academy was responsible for a much more complex understanding of the soul's vehicle. E. R. Dodd traced the development of the concept in his translation of the "Elements of Theology"³²:

"The modern mystery-religions, and especially that singular amalgam of discredited speculations known as theosophy, have made us familiar with the theory that mind and body are linked together by a *tertium quid*, an inner envelope of the soul, which is less material than the fleshly body and survives its dissolution, yet has not the pure immateriality of mind. This doctrine is popularly regarded as oriental. But it has, in fact, a very long history in European thought reaching back from the Cambridge Platonists in the seventeenth century to

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Porphyry and Iamblichus in the fourth, and traceable thence to an origin in the classical period of Greek philosophy."

Dodd notes that the concept of the soul's vehicle is

- 1. Prevalent in Eastern philosophies.
- 2. Developed in schools of platonic philosophy.
- 3. A feature of modern western schools of esoteric philosophy.

David Tansley³³ traces the same concept in belief systems as varied as Taoism, Sufism, Hinduism and Kabbalah.

The twentieth century saw the "subtle body" presented and analysed by clairvoyants such as Rudolf Steiner³⁴ and Rev Mario Schoenmaker³⁵. The widespread occurrence of the concept certainly qualifies it as an "archetype" under the definition of Yates.

The creation of the subtle body and the ascent and descent through the spheres

In some Western versions of the archetype, the subtle body is created when the soul descends from the heavens through the planetary spheres. Aristeides Quintillianus describes the soul's descent in a third century text as follows³⁶:

"Therefore, desiring a body, the soul, they say, takes and draws along from each of the higher regions some portions of bodily combination. Going through each of the ethereal orbits, the soul partakes of everything so far as it is luminous and adapted for warming and naturally enclosing the body, plaiting certain bonds from these orbits for itself as a sort of latticework by irregular movement of the reciprocal lines among the movements themselves."

The soul, in Platonic philosophy is circular or spherical. It therefore is seen as taking on attributes from the different planetary spheres until it creates a final "oysterlike instrument" (after the Phaedrus). Aristeides describes how the soul exchanges its spherical surfaces, "which are in accord with luminous and ethereal matter, for a membranaceous figure;"³⁷ and creates a subtle body which is "welded together from some membranaceous surfaces, sinuous-like lines, and breath."³⁸ In fact, Aristeides seems to suggest a series of subtle bodies from the luminous body ("augoeides" of Porphyry) composed of a matrix of luminous lines, down to a body that is close to the nature of matter.

On the other hand, the qualities which comprise the subtle bodies are progressively released as the soul ascends *through* the planetary spheres. The Hermetica (Poimandres I: 24-26) describes this as a relinquishing of negative qualities of the soul until "stripped of the effects of the cosmic framework the human enters the region of the ogdoad;"³⁹

The later development of alchemy transformed this archetype from an event which occurred after death or before rebirth into a psychological transformation process:

"The journey through the planetary houses, like the crossing of the great halls in the Egyptian underworld, therefore signifies the overcoming of a psychic obstacle, or of an autonomous complex, suitably represented by a planetary god or demon. Anyone who has passed through all the spheres is free from compulsion; he has won the crown of victory and become like a god." 40

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The archetype of the planetary spheres is here seen as an *inner* reality rather than an *outer* reality.

The transformation from outer planets to inner is traceable to the early years of the Christian era. Origen (C2 CE) was quite unequivocal when he wrote "...understand that thou thyself art another world in little, and has within thee the sun and the moon, and also the stars."

A modern alchemist has quoted Paracelsus:

",,When a child is born, its heavens are born with it and the seven organs which for themselves have the power to be seven planets and thus everything that belongs to its heavens", famed Paracelsus once wrote."

The German theosophist, Jakob Böhme completes the cycle. He seems to have taught that the human being had a subtle body which contained the planets, distributed along the human body. This was illustrated by D. A. Freher in an edition of the works of Böhme produced in 1764.

In summary then, it is possible to trace the development of the archetype of planetary spheres from an astronomical description (as accepted, for example, by Aristotle) to a description of an inner experience.

Details of the subtle body: the chakras or spiritual centres

While philosophers in the West were describing the soul in terms of "subtle bodies" or soul vehicles descending through planetary spheres, their colleagues in the East - philosophers, yogis and clairvoyants were mapping a series of subtle bodies – often in considerable detail. In India, a series of "nadis" or "channels" were charted. These represented channels through which energies would flow. The same idea was replicated in the meridian system of Chinese acupuncture therapy. Even in early Indian literature such as the Vedas and the Upanishads (eg Yogatattva Upanishad) the theory of nadis was being articulated, together with the idea of a number of major "centres" through which the "prana" or life force was to flow. By the 15th century, these ideas had matured into a complex system called the "chakra" system. The tantric writings which presented the developed version of the system were given to the western world by the translations of Sir John Woodroffe (aka Arthur Avalon). In 1919 he published his translation of the text *Sat-Cakra-Narupana* which contained detailed descriptions of these centres⁴⁴. A summary of the network of subtle body channels in this tradition by Earnest Wood, sounds remarkably similar to the "latticework" of Aristeides:

"The [mother-power in the body] ... will go up the spine on a journey to the other end of it, the brain. In so doing, it will pass through, and perhaps linger in, six stations, called *chakras* (wheels) or *padmas* (lotuses) - terms derived from their appearance. These *chakras* are, however, very fine (*sukshma*). They are, in fact, not threaded upon the coarse spine which we know by our physical senses of sight and touch, but upon a very fine channel (a *nadi*) within it."⁴⁵

Buddhism, also had quite a tradition of channels and centres of force. In the *Surangama Sutra* (CE 705) the Buddha explains to Ananda that there are six "knots" in the human being which have to be untied in order, from the lower to the higher.⁴⁶

Tibetan Buddhism later adopted the map of the Tantra as "Vajrayana" Buddhism⁴⁷.

Although writers would sometimes differ on the exact number of chakras, some allowing up to fifty⁴⁸, the general consensus was that the most significant were the six said to be aligned along the spinal axis, plus a centre at the crown of the head (Figure 3):

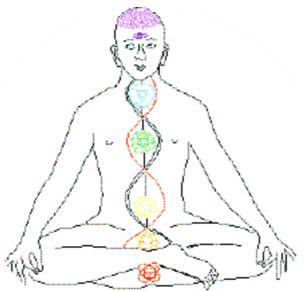


Figure 5: The Chakras in traditional positions

The chakras were described as having distinct positions; colours; sounds (Sanskrit *bija* or "seed sounds"); numbers of lotus petals; and deities. The following table gives some of these properties according to the tantric text *Sat-Cakra-Narupana*

Sanskrit name Position		Colour	Sound
Muladhara	Between the genitals and the anus	Red and gold	Lam
Svardhisthana	At the root of the navel	Vermillion	La
Manipura	Solar plexus	Blue	Ram
Anahata	Heart	Yellow	Yam
Visuddha	Throat	Purple	Ham
Ajna	Brow	White	Om
Shasrara	Crown of the head	Multi-coloured	none

Table 4: Chakras in the Tantric Tradition

At this stage it can be noted that the description of the chakras has certain correspondences with Plato's "whorls":

The whorls have colours – as do the chakras; both have characteristic colours; the whorls have positions; the whorls also have deities (the sirens); the sirens (like the deities) correspond to sounds.

Chakras in the West - Spiritual Centres

The publication of the Eastern material acted as a stimulus upon some of the esoteric writers of the early twentieth century. Charles Leadbeater produced the monograph *Chakras* in 1927 which contained detailed descriptions of the chakras as he saw them.⁴⁹

Leadbeater himself had mentioned chakras or "centres of force" in a previous publication. ⁵⁰ *The Inner Life* actually pre-dated Woodroffe's work, so it can be seen that interest in the chakras was already alive in the West – perhaps stimulated by Max Mueller's editions of *Sacred Books of the East* which began in 1875. Even earlier, in 1904, the clairvoyant, Rudolf Steiner was reporting:

"The organs now to be considered are perceptible to the clairvoyant near the following parts of the physical body: the first between the eyes; the second near the larynx; the third in the region of the heart; the fourth in the so-called pit of the stomach; the fifth and sixth are situated in the abdomen. These organs are technically known as wheels, *chakrams*, or lotus flowers." ⁵¹

James Morgan Pryse, writing in 1910⁵², was suggesting that certain symbols of the New Testament Book of Revelation could be regarded as relating to these "centres of force". The concept has been revisited by Edgar Cayce – who preferred the term 'psychic centre' over 'chakra'. In a series of readings on the Book of Revelation, Cayce equated the seven churches; the seven seals on the book with the lamb; and the seven angels with the psychic centres. He also identified the "psychic centres" with the ductless glands of the endocrine system. ⁵³ Rev Mario Schoenmaker in *A Cosmic Understanding of the Book of Revelation* repeats these identifications (using the term 'spiritual centres') and also assigns the seven colours of the rainbow in order of ascent. ⁵⁴ This colour scheme became the norm over the twentieth century. Mario Schoenmaker, who was a practising clairvoyant, observed in fact that

"In ideal circumstances a particular colour is associated with each centre, but we have never observed this in practice because that would only occur in an entity who has reached perfection. Nevertheless we have included the colours here because they can be used in meditation in order to contact and energise the spiritual centres." ⁵⁵

By the end of the twentieth century, the chakras (aka 'centres of force', aka 'psychic centres', aka 'spiritual centres') had become a staple of Western esoteric writing. Dr Richard Gerber writing in 1988, was able to define illness as a "manifestation of chakra dysfunction." ⁵⁶

A summary of typical attributes is given in Table 5:

Centre & English name	Sanskrit Name	Physiological System ⁵⁷	Gland ⁵⁸	Colour ⁵⁹	Planet Symbol ⁶⁰
1. Base	Muladhara	Reproductive	Gonads	Red	Saturn
2. Sacral	Svardhisthana	Genitourinary	Cells of Leydig	Orange	Neptune
3. Solar Plexus	Manipura	Digestive	Adrenals	Yellow	Mars
4. Heart	Anahata	Circulatory	Thymus	Green	Venus
5. Throat	Visuddha	Respiratory	Thyroid	Blue (Grey)	Uranus
6. Brow	Ajna	Autonomic nervous system	Pineal	Indigo	Mercury
7. Crown	Sahasrara	Central nervous system General control	Pituitary	Violet	Jupiter

Table 5: Western Centres and their Correspondences

Chakras as 'Inner Planets'

It has been possible to establish that both Eastern and Western esoteric philosophies shared the concept of a 'subtle body'. This concept, shared across diverse times and cultures fulfils Yates' definition of an archetype. The Western tradition, through the Neoplatonist philosophers, considered that this body was built up from various planetary influences as the soul descended through the spheres into a new incarnation. It was a short step to deciding, as some of the alchemists did, that the planets were hence internalised. The Eastern tradition focused on a set of energy centres (the chakras) which acted as conduits for inner energies; visualised as a set of rotating wheels located along the spine. It has been possible to observe that the chakra concept rapidly spread from East to West in the twentieth century. The ease with which this concept was appropriated by Western seers, also qualifies it as an archetype. At this stage it is proposed that the internalised planets and the energy centres are the same archetype.

It has proven possible to interpret texts which belong to the Western religious traditions (the Book of Revelation, for example) in terms of the concept derived from Eastern sources. This suggests the concept of inner energy centres sits comfortably within the Western tradition also.

The seer Jakob Boehme (1575-1624) provides a link in this chain. David Tansley quotes a passage from Boehme's first work, *Aurora*. Boehme produced this in 1612, predating any information from Easter sources:

"Now this wheel hath seven wheels one in another, and one nave, which fitteth itself to all the seven wheels, and all the seven wheels turn on that one nave: Thus God is one God, with seven qualifying or fountain spirits one in another, where always one generateth the others, and yet is but one God, just as these seven wheels are but one wheel." ⁶¹

Boehme's description unites the chakras as "wheels" with Plato's "whorls" rotating on an axis. It establishes at least one reference to the chakra archetype in Western esoteric literature. His disciple, Johann Gichtel (1638-1710), went further. In *Theosophia Practica* he reproduced a series of drawings showing the planets in similar positions to the chakras:



Figure 6: "Unregenerate Man" from J. Gichtel

Charles Leadbeater discusses Gichtel's picture in his book on chakras. With Leadbeater's commentary, there is a meeting of the two perceptions of the archtype. According to Leadbeater, Gichtel "assigns planets to the chakras", 62 however, since the first translations of the Upanishads were not made until 1657 – and then into Persian – it is unlikely that Gichtel would have ever come across the word 'chakra'. 63

Gichtel, in fact, was perceiving 'planets' – to which Leadbeater would later assign 'chakras'. It is at this point that the 'chakras' archetype can be identified with the 'planets' archetype.

Interpreting the Myth of Er using the archetype model

The discussion of the Myth of Er in terms of the Ptolemaic model of a physical universe has been observed to fail in four significant areas of the description:

- 1. The physical model fails to explain the "pillar"; the "attachments"; and the "spindle of Necessity".
- 2. The physical model fails to explain why Plato chose the image of the 'whorl' as against the conventional 'sphere'.
- 3. When planets are matched to whorls, the positions of the planets are different to those assigned by Ptolemaic cosmology.
- 4. There is no explanation for the width of the whorls.

1. The "pillar"; "attachments"; "spindle"

These are grouped together, because in the 'soul vehicle' archetype they are part of the same aspect of the subtle body.

In the context of the subtle body archetype, if the whorls are the chakras, then the pillar of light/spindle is the spine – or more exactly, the channel within the spine around which the chakras are located. Curiously, the word Plato uses for 'whorl' (sphondulos) means a vertebra which could be a coincidence or possibly an example of Platonic word-play. A search using the lexicographical tools on the Perseus site⁶⁴ reveals that the word occurs six times in the Platonic corpus. Five of these occurrences are in the "Myth of Er"; the sixth occurrence is in the Timaeus, where it is used in its original anatomical sense.

The connections of the pillar of light with the sky and the earth, then become interpreted as the 'nadi' system in the chakra archetype.

In the context of the death/rebirth archetype, the pillar of light has a similarity with a number of Near Death Experience (NDE) accounts. Here the comparison is with the 'tunnel of light':

...I was in a tunnel-like black space. Just beyond a light was glowing invitingly. I was encouraged by a strong feeling to enter the light. I approached without haste as I felt the light was part of the jigsaw to which I rightfully belonged. I was peaceful, totally content, and I understood every mystery - I was not told, I just knew, the light held all the answers⁶⁵ ...

In some types of yoga meditation, the practitioner directs the energies of the different centres to enter and dissolve in the central channel. This gives the experience of the "Clear Light"" or the "ground luminosity" mentioned in the *Tibetan Book of the Dead*. 66

"In this way the yogin is imitating what happens at death: when the knots in the channels [ie the chakras] are released, the winds [energies] flow into the central channel, and enlightenment is momentarily experienced." 67

The experience of the 'tunnel' can then be understood in the context of the subtle body archetype, as the entry of consciousness into the 'central channel'; the 'light at the end of the tunnel' is then the emergence into a state of 'enlightenment'.

This interpretation is made explicit in the following NDE account:

"In 1988, Gary Busey was riding his motorcycle and was nearly killed in a severe accident in which he received head injuries that put him at death's door. The following words are Gary's words from an article by Luane Lee that appeared in the Long Beach Press on February 28, 1991:

'The great tragedy is not death, but what dies within you when you are alive. The second part of my life started on December 4, 1988. I crossed to the other side. I went to a room full of lights. I was just the cord that lives within my spinal column which houses the soul. [Bold emphasis author's.] I had three plates of light come up to my face and tell me I was in a beautiful place of love. And I was love. I could go with that energy there and leave this body. Or I could go back to this body and resume my destiny. It was my choice."

Dyer comments: "This is not the talk of a new-age guru, but a brawny Texan who lived life on the raw edge all of his life up until his encounter with the other side." ⁶⁹

A diagrammatic depiction of the "pillar" with "attachments" and "spindle" is given in Figure 5:

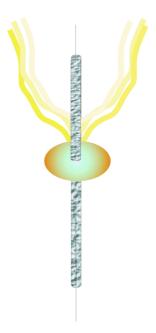


Figure 7: Pillar, Spindle, Whorls and Attachments

In terms of the archetype, the "spindle of Necessity" is, of course, the karma of the incarnating soul. Carl Jung makes an interesting observation about the Western equivalent of karma:

"This very ancient idea of what we might call an inborn bill of debt to fate is the Western version of a prenatal karma. It is the archons, the seven rulers of the planets who imprint its fate upon the soul. Thus Priscillian (d. c. 385) says that the soul, on its descent to birth, passes through 'certain circles' where it is made captive by evil powers, 'and in accordance with the will of the victorious prince is forced into divers bodies, and his handwriting inscribed upon it."

2. The whorls

The archetypal model so far can be summarised as follows:

As the soul approaches incarnation, the energies which will create the subtle bodies must first come together. These energies will, in the end, direct the expression of the physical body, but Plato is describing the scaffolding which must be put in place before the subtle bodies themselves are created with the new being. The first element of the subtle bodies is the spinal channel – which in the Tantric tradition contains within itself an even finer channel. This compares with Plato's pillar of light which contains the spindle of Necessity within.

In the subtle body archetype, the energies of the spiritual centres, (the chakras) need to pour themselves into the new framework. In the Western version of the archetype the soul acquires certain characteristics from each of the planetary spheres as it descends. The energies are at first housed within the channel within the spine – hence the observation by Gary Busey that this chord "houses the soul". The chakras are traditionally translated as "wheels" – Leadbeater informs us that this is because they rotate. ⁷¹ Note that Plato's whorls "revolve gently".

There is a certain symmetry in Jung's understanding of archetypes: "Every archetype including the Self has a shadow side." The shadow side of the rebirth archetype is the death archetype. For this reason, some aspects of death can be viewed as a mirror of the processes of rebirth. The *Tibetan Book of the Dead* relates a process where the energies of the chakras gradually dissolve into a central point:

"...the vital-force, passing from the navel psychic-nerve centre and the principle of consciousness, passing from the brain psychic-nerve centre, unite in the heart psychic-nerve centre, and in departing thence from the body, normally through the Aperture of Brahma, produce in the dying person a state of ecstasy of the greatest intensity [translator's note]".

If then, the chakras coalesce at death, then by symmetry, at birth, they might be expected to exist in a state where they are already collapsed inside one another – just like Plato's metaphor of nested bowls.

In fact, Sogyal Rinpoche relates exactly this process:

"Here [the stage of inner dissolution] the process of death mirrors in reverse the process of conception." ⁷⁴

During the development of the foetus:

"...our father's essence, a nucleus that is described as 'white and blissful', rests in the chakra at the crown of our head at the top of the central channel. The mother's essence, a nucleus that is 'red and hot', rests in the chakra said to be located four finger-widths below the navel. It is from these two essences that the next phase of the dissolution evolve." ⁷⁵

The emphasis on development at the navel is important:

"Our physical form arises from a subtle-energy body originating at the navel. The 'channels of formation' rise to generate the brain, descend to create the genitals, and flow through the neural tube to generate the 'channel of life'. The etheric energy system encased within our physical bodies, Tibetans claim, is the source not only of physical existence, but the 'wishfulfilling jewel' which awakens our innermost 'Body of Truth'."

From these comments it can be understood that the energies do *not* simply descend from the top of the spinal channel, and space themselves in orderly fashion. Rather, they enter at a single point – the abdominal centre – and from there fill the positions of the centres. Some rise towards the head, while one falls away towards the base centre position.

3. The order of the widths

Using the archetype model as a framework a mechanism can now be established for the ordering of the whorls, both in terms of width and in terms of position from the central spindle.

Firstly, the whorls are placed in these two ordered lists, referenced by Plato's 'whorl number' (Table 6):

Outermost

Whorl Number	Width	Position
1	1 st	
2	8 th	
3	7^{th}	
4	3 rd	
5	6 th	
6	2 nd	
7	5 th	
8	4^{th}	

Inmost

Table 6: Width of Whorls

The broadest whorl becomes the auric field around the individual. The subtle body archetype describes this as both "multicoloured" and "star-filled".⁷⁷

This leaves seven positions to be filled. They will be labelled with names of the centres (Figure 8):

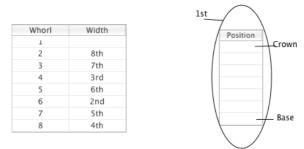


Figure 8: Entry of the Seven Centres 1

Following the suggestion from the Tibetan version of the archetype that the energies enter in at the point below the navel (the Leyden centre), the second widest whorl (number 6) will be entered in at this position (Figure 9):

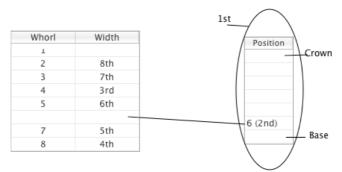


Figure 9: The Entry of the Seven Centres 2

The third widest (whorl 4) now becomes the base centre:

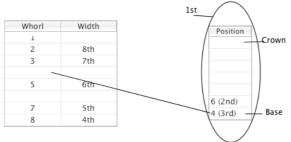


Figure 10: The Entry of the Seven Centres 3

The chakra rankings now fill from the solar plexus centre up:

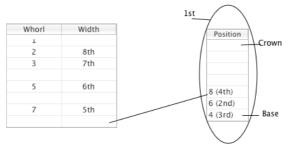


Figure 11: The Entry of the Seven Centres 4

The filling up process continues:

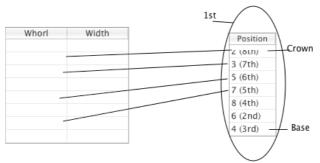


Figure 12: The Entry of the Seven Centres Phases 5 – 8

The developmental process is now complete. There is now a rationale for Plato's dimension of 'width'. In the process, an interesting table of correspondences has been established:

Whorl	Position	Relative width of circle	Relative speed of rotation	Colour	Planet	Chakra
1	Outermost	Broadest		Multicoloured	Fixed stars	Auric field
2		8 th	5	Yellower than 7, 8	Saturn	Crown
3		7^{th}	4	Whitest	Jupiter	Brow
4		6 th	3	Reddish	Mars	Base
5		6 th	2	Like 2	Mercury	Throat
6		2^{nd}	2	2 nd whitest	Venus	Abdominal
7		5 th	2	Brightest	Sun	Heart
8	Innermost	4 th	Fastest	Receives colour by the seventh shining on it	Moon	Solar Plexus

Table 7: Correspondences with Spiritual Centres

The names of the planets have been retained according to the Ptolemaic model. The correspondences this gives between the Western system of the subtle body, derived from the planets; and the Eastern system of chakras is explicitly articulated in Table 8:

Planet	Chakra
Fixed stars	Auric field
Saturn	Crown
Jupiter	Brow
Mercury	Throat
Sun	Heart
Moon	Solar Plexus
Venus	Abdominal
Mars	Base

Table 8: Correspondences between planets and chakras

From this table:

- 1. The heart chakra is the brightest and equates to the Sun.
- 2. The base chakra is red and equates to Mars.
- 3. Saturn and Jupiter are placed at the top two centres.

In summary, the archetypal model explains each feature of Plato's story – including those which the physical model cannot.

The remainder of the paper will proceed to discuss certain implications of the archetypal model.

Implications:

1. The notes the Sirens sang

Plato records that on "each of its circles" was a "Siren ... uttering one tone each.."

What are these tones and what do they form? It would be a further test of the archetypal model if the musical modes suggested by Plato's "Myth of Er" were relevant to the human psyche.

Earnest McClain through analysing the ratios Plato provides in the Timaeus, has provided us with the following two ideal scales. ⁷⁸ It is very likely, that since (according to the Timaeus), the creation was created in these scales, Plato means his readers to understand that the Sirens are singing the same notes.



Figure 13: Plato's Ideal Scale Ascending

The scale created by the harmonic ratios of the Timaeus is the Greek Dorian mode. In its ascending form, it is known as the major scale.

Descending, the scale maintains the same ratios, but does not quite correspond to common Western modes:

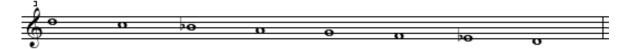


Figure 14: Plato's Ideal Scale Descending

This is similar to the descending melodic minor scale, but it contains a flattened second.

If the "Harmony of the Spheres" archetype is linked to the "death/rebirth" archetype, through the archetype of the "soul vehicle"; then it could be expected that these two scales are imprinted upon the human psyche.

The major scale is certainly a relevant musical expression. John Mehegan in surveying a popular music of the first part of the twentieth century (Jazz), described an almost exclusive major scale music, "There are probably only five or six 'authentic' (begin and end in minor) minor tunes in all jazz repertoire."

It is interesting to note that even though Western music does not use a scale that contains the flattened second, this chromatic alteration has become a feature of Jazz harmony.

2. Near Death Experiences

If the "Harmony of the Spheres" is part of the death/rebirth archetype, then the first question that could be asked, is whether music is a part of the modern version of the archetype – the "Near Death Experience". The answer appears to be "Yes". According to Kevin Williams:

"According to Dr. Joel Funk, a professor of psychology at Plymouth State College in New Hampshire, about 50% of near-death experiencers hear music during their NDE. They describe this music mostly as 'music with a beautiful, floating sound.' Dr. Funk played various kinds of music for 60 near-death experiencers and found that they identified New Age style synthesized music as nearest to what they had heard during their NDE. Dr. Funk comments, 'Some people burst into tears when they recognize the music of their NDEs.'"⁸⁰

The composer Steve Roach, created an album of music, recreating the music he heard in his own NDE⁸¹. The music on the album is almost entirely created in Plato's "ascending scale" (the major scale).

Plato's pillar has already been equated with the NDE "tunnel". If this is a significant aspect of the archetype, then it could be anticipated that other expressions of the archetype, where the soul leaves the body, might have similar "tunnels" or "pillars". The tunnel appears in the shamanic version of the archetype:

"In answer to the question of whether near-death experiences (NDEs) are similar to shamanic journeys, Michael Harner, considered by many the world's leading authority on shamanism, wrote:

'Yes. The shaman's journey starts with an experience of going through a tunnel of some kind, usually with a light at the end, and this is very similar to descriptions of the so-called near-

death experiences. But the shaman goes all the way through the tunnel and explores the world that people feel themselves passing into at the time of death. (1987, pp. 5–6)."**82

The pillar makes an appearance as the "pillar of light" experienced by Joseph Smith, the founder of Mormonism.

"... I saw a pillar <of> light exactly over my head above the brightness of the sun, which descended gracefully gradually until it fell upon me. It no sooner appeared than I found myself delivered from the enemy which held me bound..."83

Finally, many after-life myths (including the Myth of Er) talk about visions of heaven and hell.

In the *Bardo Thodol*, the consciousness experiences both peaceful and wrathful deities. Taking the image of the pillar and the whorls to be the unfolding of the energy centres of the subtle body, then in the reverse process, the centres would coalesce into one again. During this time, the consciousness might be expected to experience the contents of these centres. Plato assures us that each centre contains a singing deity (the Siren); a contemporary psychologist might well identify these inner deities as autonomous psychic contents (as documented, for example, by Carl Jung in *Psychology and Alchemy*⁸⁴). The individual might experience the contents of the centres as benign (cf "peaceful deities") or as accusatory ("wrathful deities") – in either case, for the individual this would be an experience of the contents of their own psyche. It may prove in the future that the majority of NDEs can be assimilated into this process. A "hell" NDE, for example, may simply be the result of consciousness exiting through the "wrong" centre. In the Tibetan version of the archetype, the exit should be through the "Aperture of Brahma" – the crown centre. This would certainly be a fit to the light-filled accounts of many NDEs. On the other hand, an exit through, say, the base centre, to which Plato assigns a "reddish colour" might provoke an experience like those recorded by Maurice Rawlings in *To Hell and Back*. 85 In either case, the experience is an expression of the inner contents of the individual – not a judgment by an external force.

Conclusion

This paper began with the objective of showing that an archetypal model was a better fit for Plato's "Myth of Er" than a physical model. In terms of the map of the psyche introduced on page 20, the Myth was examined as a Realm 2 experience, as against a Realm 1 experience. Having established that such a model was indeed more accurate in accounting for the descriptions given by Plato, it was then able to be used as a measuring rod, against which to compare other aspects of the total archetype. Perhaps the great value of Plato's story is that it enlarges our understanding of its associated archetypes and so contributes to adding to the map of Realm 2, the realm of the numinous experience.

¹ Jenny Yates, New Death Experiences: A Reader, (New York: Routledge, 1996), 147.

² Stephen Frank, "Lecture 7", Astronomy 111: An Introduction to Astronomy and the Scientific Method (December 6, 2004). http://www-astronomy.mps.ohio-state.edu/~frank/Astronomy_Josephinum/Lectures/Lecture7/Lecture7.rtf (accessed 25 June 2006).

³ Joscelyn Godwin, (ed.) *The Harmony of the Spheres*, (Vermont: Inner Traditions International, 1990).

⁴ Ernest G. McClain, *The Pythagorean Plato* (Maine: Nicolas-Hays, 1978)

⁵ Pearl Storey, "Mythic Tracings in Near-Death Experiences" (PhD thesis, Pacifica Graduate Institute, 2004), 47.

⁶ Ibid.

⁷ Plato, *The Republic*, 616b – 617c, Translation J. Rawson.

⁸ Aristotle, *De Coelo* II.9 (290b.) trans. J Stocks, in *The Works of Aristotle Vol 1*, ed. Robert Maynard Hutchins, (Chicago: William Benton, 1952), 382.

⁹ Ibid.

- ¹⁰ Godwin, *Harmony*
- Marcus Tullius Cicero, "The Dream of Scipio," in *Music, Mysticism and Magic*, ed. J. Godwin, 10 (London: Routledge and Kegan Paul, 1986).
- ¹² Joscelyn Godwin, *Harmonies of Heaven and Earth* (Vermont: Inner Traditions International, 1987).

¹³ Ibid., 144

- ¹⁴ Aristotle, *Metaphysica*, trans. W. Ross, (Oxford: Clarendon Press, 1908).
- ¹⁵ Claudius Ptolemy, *Tetrabiblos* trans. F. Robbins, (Cambridge, MA: Harvard University Press, 1949)
- ¹⁶ Ruby Blondell, "Humour in Plato Call for Papers", *Philosophical Calendar* (n.d.). http://www.crvp.org/Philosophical_Calendar/callforpapers/Plato%20as%20Literary%20Auth or.htm (accessed 20 June 2006).

¹⁷ McClain, Pythagorean Plato.

- 18 Sigmund Freud, *The Interpretation of Dreams*, trans. J. Strachey, (New York: Basic Books, 1955), 320.
- ¹⁹ Carl Jung, *The Archetypes and the Collective Unconscious* 2nd ed., (London: Routledge and Kegan Paul, 1968),

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